

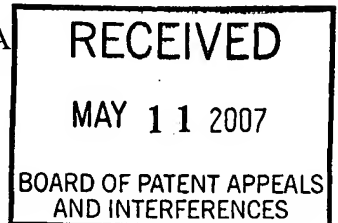


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Applicant: Stephen J. Todd, et. al.
Serial No: 10/762,044
Confirmation No: 4481
Filed: January 21, 2004
For: METHODS AND APPARATUS FOR MODIFYING A
RETENTION PERIOD FOR DATA IN A STORAGE
SYSTEM

Examiner: Etienne Pierre Leroux
Art Unit: 2161



CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

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APPELLANTS' BRIEF PURSUANT TO 37 C.F.R. §41.37

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This brief is in furtherance of the Notice of Appeal mailed on February 27 and received by the PTO on March 5, 2007. In accordance with 37 C.F.R. §1.8(a), the deadline for submission of this appeal brief under 37 C.F.R. §41.37(a)(1) is May 5, 2007. Because May 5, 2007 falls on a Saturday, the deadline for submission is extended, under 37 C.F.R. §1.7, to the following Monday, May 7, 2007. A check for the fee required under 37 C.F.R. §41.20(b)(2) is submitted herewith.

I. REAL PARTY IN INTEREST (37 C.F.R. §41.37(c)(1)(i))

The real party in interest in this application is the assignee, EMC Corporation, a corporation having a place of business at 176 South Street, Hopkinton, MA.

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. §41.37(c)(1)(ii))

There are no other appeals or interferences known to the Appellants, the Appellants' legal representative, or the assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS (37 C.F.R. §41.37(c)(1)(iii))

There are eighty total claims currently pending in this application (i.e., claims 1-80), of which six are independent, and seventy-four are dependent. Each of claims 1-80 stands rejected and each of these claims is appealed. The appealed claims are set forth in Appendix A. The status of each of the claims is summarized in the list below:

1. Rejected and Appealed: Claims 1-80
2. Allowed: None
3. Withdrawn: None
4. Objected To: None

5. Canceled: None

IV. STATUS OF AMENDMENTS (37 C.F.R. §41.37(c)(1)(iv))

Appellants filed a Request For Pre-Appeal Brief Review with the Notice of Appeal filed on February 27, 2007, but have not filed any amendments subsequent to the Final Office Action of November 27, 2007.

V. SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. §41.37(c)(1)(v))

Appellants appreciated that it is often important for a business or institution to prevent records from being deleted or modified until a certain period of time has elapsed (specification, page 1, lines 15-17). Thus, one embodiment of the invention is directed to the use of a retention period that may be assigned to a unit of data stored on a storage system, and that specifies a period of time during which the storage system will not permit deletion of the unit of data (specification, page 15, lines 1-12). Thus, if a request to delete the unit of data is received before expiration of the retention period, the request is denied and the unit of data is not deleted.

Appellants also appreciated that in some situations, it may be desired to reduce the length of a previously defined retention period before that retention period expires (specification, page 20, lines 26-29). Such situations may arise, for example, when an event occurs that may obviate the need to retain the data for the entire length of a previously defined retention period. For example, the death of a medical patient may obviate the need to retain the patient's medical records (specification, page 20, line 29 - page 21, line 1).

Each of the independent claims on appeal relates to reducing a previously-defined retention period for a unit of data stored on a storage system, where the retention period defines a period during which the unit of data cannot be deleted. One group of the independent claims (i.e., claims 1, 20, and 39) relates to actions taken by the storage system in reducing the retention period of a unit of data stored thereon (e.g., receiving a request from a host to reduce the

retention period for a unit of data and reducing the retention period in response to the request), and another (i.e., claims 58, 65, and 72) relates to actions taken by a host computer in reducing the retention period of a unit of data stored on a storage system (e.g., sending a request to the storage system to reduce the retention period and receiving a response indicating that the request was granted).

Figure 5 of the application (reproduced below) conceptually shows one embodiment of the invention in which the retention period for a unit of data may be reduced. In Figure 5, host 501 sends a request 503 to a storage system 505. The request 503 seeks to reduce a retention period for a unit of data 506 (the particular type of unit of data is referred to as a CDF) stored in the storage system 505 (specification, page 21, lines 11-14). The retention period is reduced in response, which permits the unit of data to be deleted prior to expiration of the longer retention period initially specified (specification, page 22, lines 13-19).

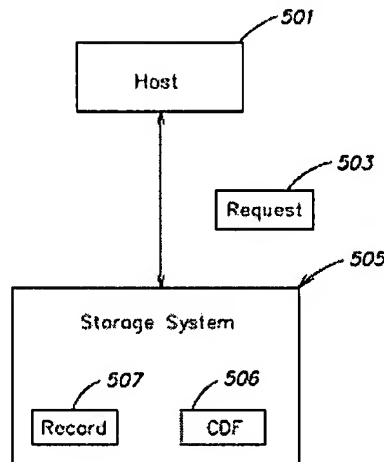


FIG. 5

The foregoing discussion of embodiments of the invention is provided merely to assist the Board in appreciating various aspects of the present invention. However, not all of the description provided above necessarily applies to each of the independent claims pending in the application. Therefore, the Board is requested to not rely upon the foregoing summary in interpreting any of the claims or in determining whether they patentably distinguish over the

prior art of record, but rather is requested to rely only upon the language of the claims themselves and the arguments specifically related thereto provided below.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. §41.37(c)(1)(vi))

The grounds of rejection to be reviewed on appeal are:

1. The rejection of claims 1-10 and 20-29 under 35 U.S.C. §102(e) as purportedly being anticipated by Bazoon (U.S. Pub. No. 2004/0249871);
2. The rejection of claims 11, 12, 30, and 31 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in view of Beresnevichiene (U.S. Pub. No. 2005/0076293);
3. The rejection of claims 13 and 32 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in view of Beresnevichiene and further in view of Chang (U.S. Patent No. 6,690,774);
4. The rejection of claims 14, 15, 17, 33, and 34 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon;
5. The rejection of claims 16-19 and 35-37 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in view of DeKimpe (U.S. Patent No. 6,542,895); and
6. The rejection of claims 38-80 "on a similar basis to claims 1-37."

VII. ARGUMENT (37 C.F.R. §41.37(c)(1)(vii))

A. Summary of The Argument

Each of the independent claims on appeal relates to reducing a previously-defined retention period for a unit of data stored on a storage system, where the retention period defines a period during which the unit of data cannot be deleted. The prior art of record does not even teach the use of a retention period, let alone reduction of a previously-defined one.

The Bazoon reference relied upon by the Examiner as purportedly anticipating each of the independent claims discloses the use of a storage period for a document that is fundamentally different from the claimed retention period. As explained in more detail below, the storage period of Bazoon defines a **maximum** period during which a document is permitted to exist in a knowledge repository, as at the expiration of this period the document is automatically deleted. By contrast, a retention period for a unit of data defines a **minimum** period during which the unit of data **must** exist on the storage system (i.e., the unit of cannot be deleted during the retention period).

B. Discussion of Bazoon (U.S. Pub. No. 2004/0249871)

Bazoon is directed to a system and method for automatically removing documents from a knowledge repository (Abstract). Bazoon discloses that knowledge repositories have been used extensively, and that the size of their document databases has grown as more documents have been added (¶0004). The growth of these databases presents problems in that it is more difficult to locate relevant documents, and the increased amount of data may slow down processing in the overall system (¶0004-¶0005). Bazoon discloses that though it is important to remove outdated documents to address these problems, system administrators do not have a significant amount of time to devote to such removal (¶0006).

The system of Bazoon addresses this problem by providing for the automatic removal of documents from a knowledge repository (¶0011). Bazoon discloses that a storage period may be

assigned to documents in a knowledge repository. In the system of Bazoon, a storage period is defined as a value or value range which tracks the amount of time remaining for the document to stay in a database (§20). That is, a storage period defines a maximum period of time that a document is allowed to exist in the knowledge repository (§20). Thus, when the storage period of a document has expired, the document is automatically removed from the knowledge repository (§24).

C. The Rejection Of The Independent Claims Relating To Reducing A Retention Period (i.e., Claims 1, 20, 39, 58, 65, 72)

The Office Action rejects each of the independent claims under 35 U.S.C. §102(e) as purportedly being anticipated by Bazoon (U.S. Pub. No. 2004/0249871). Although only claims 1 and 20 are explicitly rejected on these grounds, the Office Action states that claims 38-80 (which includes independent claims 39, 58, 65, and 72) “can be rejected on a similar basis to claims 1-37.” Appellants respectfully disagree with this rejection.

1. The Limitations On The Retention Period Specified In The Preambles Limit The Claims

The reference to the previously-defined retention period being one during which the unit of data cannot be deleted from the storage system is recited in the preamble of each of the independent claims. During a telephone interview on January 9, 2007, the Examiner stated that because this language was in the preamble, he was not giving it patentable weight. Appellants offered to amend the claims to incorporate the limitations on the retention period into the body of the claims to narrow the issues for appeal, but the Examiner indicated that he would not enter such an amendment after Final and would continue to reject the claims as anticipated by Bazoon even if the claims were so amended. Thus, Appellants decided to move forward with this appeal.

The reference to “the retention period” in the body of each claim necessarily refers to the retention period referenced in the preamble, and therefore incorporates the limitations on the retention period defined in the preamble into the body of the claim. The Federal Circuit has made

clear that limitations in the preamble of a claim are limiting when they are relied upon by limitations in the body of the claim for “antecedent basis,” i.e., where the claim introduces in the preamble a term that is later recited in the claim body. E.g., NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282, 1306, 75 USPQ2d 1763, 1781 (Fed. Cir. 2005) (“Because these limitations of claim 1 ... derive their antecedent basis from the claim 1 preamble and are necessary to provide context for the claim limitations, the use of these limitations in the preamble limits the claim.”); Eaton Corp. v. Rockwell Int’l Corp., 323 F.3d 1332, 1339, 66 USPQ2d 1271, 1276 (Fed. Cir. 2003) (“When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed combination.”).

Applying this reasoning to the independent claims on appeal makes clear that the limitations in the preambles that recite a retention period as being a “period during which the at least one unit of data cannot be deleted from the at least one CAS system,” should be construed as limiting the scope of the independent claims because the body of each of these claims refers to the previously introduced retention period. Thus, the preambles of those claims provide antecedent basis for limitations in the bodies of the claims and must be construed as limiting.

2. Bazoon Does Not Disclose A Retention Period As Claimed

Each independent claim relates to reducing a retention period for a unit of data stored on a storage system, wherein the retention period defines a period during which the unit of data cannot be deleted from the storage system. The Office Action asserts that ¶0022 Bazoon discloses establishing a retention period for a unit of data, and that the length of the retention period can be reduced. Appellants disagree.

The cited portion of Bazoon discloses that the **storage period** of a document may be reduced in response to a determination that the document is not useful. However, Bazoon does not disclose that the storage period defines a period during which a unit of data (e.g., a document) cannot be deleted, as required by the independent claims. Indeed, the storage period of Bazoon is very different from the claimed retention period.

In the system of Bazoon, a storage period for a document defines a maximum period during which the document is permitted to be stored in the knowledge repository. That is, Bazoon states, “[t]he storage period is generally defined as a value or value range which tracks the amount of time remaining for the document to stay in a database. For example, the storage period may contain a value that represents the document’s remaining number of months, days, or hours in the knowledge repository or database. Alternatively, the storage period can be a date and/or time range during which the document is allowed to exist in the knowledge repository.” (Bazoon, ¶0020). Thus, Bazoon makes clear that the storage period defines the maximum amount of time a document is permitted to exist before it is automatically deleted from the knowledge repository. Indeed, Bazoon discloses that when the storage period for a document expires, it is automatically removed from the knowledge repository (Bazoon, ¶0024).

By contrast, the retention period for the at least one unit of data recited in the independent claims is a period “during which the at least one unit of data cannot be deleted.” A retention period during which a unit of data cannot be deleted is very different from a storage period during which a document is permitted to exist. Unlike the *maximum* allowable storage period after which a document is automatically deleted disclosed in Bazoon, the claimed retention period specifies a *minimum* time period where the unit of data is required to exist.

A simple example makes the differences between the system of Bazoon and embodiments of the present invention clear. Assume a user issues a request to delete a unit of data before the retention period has expired. In Bazoon, the content would be deleted, as nowhere does Bazoon disclose that a document cannot be voluntarily deleted prior to expiration of its storage period. By contrast, in a system in accordance with one embodiment of the present invention, the deletion request would be denied and the content retained, as the specified retention period defines a period during which content cannot be deleted.

Bazoon simply does not disclose or suggest that a storage period for a document is a period during which the unit of data cannot be deleted. Consequently, Bazoon does not disclose at least one unit of data having a retention period during which the at least one unit of data cannot be deleted from the at least one CAS system, as recited in each of the independent claims,

and therefore necessarily does not disclose sending or receiving a request to reduce the length of the retention period and/or reducing the length of the retention period in response to such a request.

During a telephone interview on January 9, 2006, the Examiner acknowledged that Bazoon does not explicitly state that a storage period for a document is a period of time during which the document cannot be deleted. However, he indicated that the use of the term "storage period" necessarily defines a period during which a document cannot be deleted. The Examiner's position is unsupported by any such suggestion in the reference, and is belied by the fact that the reference describes a storage period explicitly as defining something different, i.e., a maximum time period after which a document must be deleted.

Although not stated as such, the Examiner's position essentially is that the term "storage period" inherently defines a period during which a document cannot be deleted. The rejection is clearly improper on those grounds, as the standard for making an inherency rejection is undoubtedly not met.

As MPEP §2112 makes clear, the bar is extremely high for establishing an inherency rejection. That is, "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" MPEP §2112(IV), page 2100-47 of Original Eighth Edition, Rev. 5, Aug. 2006.

There is simply nothing in Bazoon which suggests that a storage period must necessarily define a period during which a document cannot be deleted. Even more strikingly, Bazoon specifically defines a storage period otherwise – i.e., as a period after which a document must be deleted.

In view of the foregoing, it should be appreciated that Bazoon does not disclose the use of a retention period during which a unit of data cannot be deleted from a storage system, and

therefore necessarily does not disclose sending a request to reduce such a retention period or reducing such a retention period in response to such a request.

As each of independent claims 1, 20 and 39 recites receiving a request to reduce the length of such a retention period and the reducing of the length of the retention period in response to the request, the rejection of each of those claims is improper and should be reversed. Similarly, as each of independent claims 58, 65 and 72 recites sending a request to reduce the length of such a retention period and receiving a response indicating that the request was granted, the rejection of those claims also is improper and should be reversed.

D. The Dependent Claims

Each of the dependent claims depends from one of the independent claims discussed above and each is patentable for at least the same reasons as its respective independent claim. Although some of the dependent claims are rejected under §103 based on Bazoon in combination with one or more secondary references, none of the secondary references disclose a retention period (and the Office Action does not allege as such). Therefore, these references do not cure the above-discussed deficiencies of Bazoon relating to the independent claims.

Several of the dependent claims further distinguish over the prior art of record for additional reasons and are separately patentable from their independent claims for reasons discussed below. It should be appreciated that the failure to argue the separate patentability of any of the other dependent claims is not a concession that those claims are not separately patentable for any context other than this appeal, including when considered with respect to other prior art not of record.

1. Claims Relating To An Event Command (i.e., Claims 2, 21, 40, 60, 67, and 74)

The Office Action rejects claims 2 and 21 under 35 U.S.C. §102(e) as purportedly being unpatentable over Bazoon, and claims 40, 60, 67, and 74 “on a similar basis.”

Each of these claims relates to the request from the host computer to the storage system to reduce the length of the retention period comprising an event command indicating the occurrence of an event.

The Office Action asserts that Bazoon discloses this limitation at ¶0022, by virtue of the determination of usefulness. *See* Office Action, pages 2-3. Appellants respectfully disagree.

The cited paragraph of Bazoon does not disclose or suggest that a request from a host computer to a storage system to reduce the length of a retention period comprises an event command indicating the occurrence of an event. Rather, this paragraph discloses only that the storage period of a document may be reduced in response to a determination that the document is not useful.

The determination that a document is not useful is not an event command indicating the occurrence of an event. Moreover, even if this determination is construed to be an event, it is not part of a request from a host computer to a storage system, as recited in each of claims 2, 21, 40, 60, 67, and 74. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

2. Claims Relating To Reducing The Retention Period By Referring To
Information Within Or Accessible To The Storage System (i.e., Claims 3, 22,
and 41)

The Office Action rejects claims 3 and 22 under 35 U.S.C. §102(e) as purportedly being unpatentable over Bazoon, and claim 41 “on a similar basis.”

Each of claims 3, 22, and 41 requires that the act of reducing the length of the retention period of a unit of data further comprise an act of determining the manner of reducing the retention period by referring to information stored within or accessible to the CAS system. For example, as described in Applicants' specification at page 22, lines 20-29, the storage system may have previously-stored information specifying the length of a new retention period and may refer to this information to reduce the retention period.

The Office Action asserts that Bazoon discloses this limitation at ¶0022, by virtue of the determination of usefulness. *See* Office Action, page 3. Appellants respectfully disagree. As discussed above, the system of Bazoon determines whether a document is useful and, if not, reduces the storage period for the document. Nowhere does Bazoon disclose or suggest that the manner in which the length of the retention period is reduced is determined by referring to information stored within or accessible to the storage system. Accordingly, claims 3, 22 and 41 further distinguish over the prior art for this additional reason and their rejection should be reversed.

3. Claims Relating To Specifying The Manner of Retention Period Reduction In The Request (i.e., Claims 4, 23, 42, 62, 69, and 76)

The Office Action rejects claims 4 and 23 under 35 U.S.C. §102(e) as purportedly being unpatentable over Bazoon and claims 42, 62, 69, and 76 “on a similar basis.”

Each of claims 4, 23, 42, 62, 69, and 76 requires that the request from the host to the at least one storage system to reduce the length of a retention period specify not only that the retention period be reduced, but also specify the manner in which the length of the retention period is to be reduced. For example, as described in Applicants' specification at page 22, lines 20-29, the request sent from the host computer to the storage system to reduce the retention period may specify the length of the new retention period. This is an alternative embodiment to that recited in claims 3, 22 and 41, wherein the reduced retention period is determined by referring to stored information.

The Office Action asserts that Bazoon discloses this limitation via the very same teaching that purportedly shows the alternative embodiment discussed with respect to claims 3, 22, 41 (i.e., at ¶0022 by of virtue of the determination of usefulness). *See* Office Action, page 3. Appellants respectfully disagree. As discussed above, the system of Bazoon determines whether a document is useful and, if not, reduces the storage period for the document. Bazoon does not disclose or suggest that the determination as to whether a document is useful or not is specified as part of a request from a host computer to a storage system to reduce the length of a storage

period. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

4. Claims Relating To Reducing A Retention Period By Replacing The Unit of Data (i.e., Claims 5, 24, and 43)

The Office Action rejects claims 5 and 24 under 35 U.S.C. §102(e) as purportedly being anticipated by Bazoon, and claim 43 “on a similar basis.”

Each of claims 5, 24, and 43 relates to reducing the retention period for a unit of data by replacing the unit of data with a new unit of data having the reduced retention period.

The Office Action asserts that Bazoon discloses this limitation at ¶0022, but offers no explanation as to how the Examiner is interpreting the cited paragraph of Bazoon to disclose this limitation, or what portion of the cited paragraph the Examiner believes is relevant. *See* Office Action, page 3. Appellants disagree that the cited portion (or any other portion of Bazoon) discloses or suggests this limitation.

As discussed above, ¶0022 of Bazoon discloses that the storage period for a document may be reduced in response to a determination that the document is not useful. Thus, Bazoon teaches that the maximum retention period for a document that is not useful can be shortened. Neither this paragraph, nor any other portion of Bazoon discloses or suggests that the storage period is reduced by somehow replacing the unit of data with a new unit of data having the reduced storage period. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

5. Claims Relating To Reducing A Retention Period By Modifying The Retention Period Record (i.e., Claims 6, 25, and 44)

The Office Action rejects claims 6 and 25 under 35 U.S.C. §102(e) as purportedly being anticipated by Bazoon, and claim 44 “on a similar basis.”

Each of claims 6, 25, and 44 relates to the retention period for a unit of data being stored in a record outside of the unit of data and reducing the retention period for the unit of data by modifying the record to reduce the previously-defined retention period.

The Office Action asserts that Bazoon discloses this limitation at ¶0022, but offers no explanation as to how the Examiner is interpreting the cited paragraph of Bazoon to disclose this limitation, or what portion of the cited paragraph the Examiner believes is relevant. *See* Office Action, page 4. Appellants disagree that the cited portion (or any other portion of Bazoon) discloses or suggests this limitation.

As discussed above, ¶0022 of Bazoon discloses that the storage period for a document may be reduced in response to a determination that the document is not useful. Neither this paragraph, nor any other portion of Bazoon, discloses or suggests where or how the storage period for a unit of data is stored or how the storage period for a document is reduced, and certainly does not disclose or suggest that the storage period is stored in a record outside of the unit of data and is reduced by modifying the record. Accordingly, these claims further distinguish over the prior art of record for this additional reason and their rejection should be reversed.

6. Claims Relating To Content Addresses (i.e., Claims 7, 26, 45, 63, 70, and 77)

The Office Action rejects claims 7 and 26 under 35 U.S.C. §102(e) as purportedly being anticipated by Bazoon, and claims 45, 63, 70, and 77 “on a similar basis.” Each of these claims relates to the access request from the host to the storage system referencing a content address for the unit of data that is generated based on the content of the unit of data.

The Office Action asserts that Bazoon discloses this limitation at ¶0022, but offers no explanation as to how the Examiner is interpreting the cited paragraph of Bazoon to disclose this limitation or what portion of the cited paragraph the Examiner believes is relevant. *See* Office Action, page 4. Appellants disagree that the cited portion (or any other portion of Bazoon) discloses or suggests this limitation.

As discussed above, ¶0022 of Bazoon discloses that the storage period for a document may be reduced in response to a determination that the document is not useful. This paragraph is entirely unrelated to how users of documents in the knowledge repository identify or reference documents stored in the knowledge repository, and clearly does not disclose that documents are identified by a content address generated based on the content of the document.

Bazoon simply does not disclose or suggest that access requests from a host computer to a storage system reference a content address for a unit of data that is generated based on the content of the unit of data. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

7. Claims Related To Generating A Content Address Based Upon Only A Portion Of The Content (i.e., Claims 8, 27, and 46)

The Office Action rejects claims 8 and 27 under 35 U.S.C. §102(e) as purportedly being anticipated by Bazoon, and claim 46 “on a similar basis.”

Claims 8, 27, and 46 each is directed to the content address of the unit of data being generated based only on a first portion of the content of the unit of data and not on a second portion of the content of the unit of data. As discussed in Appellant's specification at page 25, line 30 – page 26, line 12, generating the content address from only a first portion of the content of the unit of data may be advantageous in that the second portion of the unit of data may be modified without altering the content address of the unit of data. That is, because a content address for a unit of data is generated based (at least in part) on the content of the unit of data, changing the content of the unit of data may change its content address. By generating a content address using only a first portion of the content of the unit of data and not a second portion, the second portion of the content may be modified without impacting the content address, so that the content can continue to be accessed via the same content address.

The Office Action asserts that Bazoon discloses this limitation at ¶0022, with the caption “useful and not-useful.” *See* Office Action, page 4. Neither the cited portion, or any other portion of Bazoon, discloses or suggests this limitation.

As discussed above, Bazoon does not even disclose or suggest that a unit of data has a content address that is generated based on the content of the unit of data. Thus, Bazoon necessarily does not disclose that content address is generated based on only a first portion of the content and not on a second portion. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

8. Claims Relating To Storing The Retention Period In The Portion Of a Content Unit Not Used To Generate The Content Address (i.e., Claims 9, 28, and 47)

The Office Action rejects claims 9 and 28 under 35 U.S.C. §102(e) as purportedly being anticipated by Bazoon, and rejects claim 47 “on a similar basis.”

Each of these claims is directed to the retention period being stored in the portion of the unit of data that is not used to generate the content address. As discussed above, this is advantageous in that the retention period of the unit of data may be reduced without affecting the content address of the unit of data.

The Office Action asserts that Bazoon discloses this limitation at ¶0022, but offers no explanation as to how the Examiner is interpreting the cited paragraph of Bazoon to disclose this limitation, or what portion of the cited paragraph the Examiner believes is relevant. *See* Office Action, page 4. Appellants disagree that the cited portion (or any other portion of Bazoon) discloses or suggests this limitation.

As discussed above, neither ¶0022 or any other portion of Bazoon discloses where or how the storage period for a document is stored, or the use of a content address generated based on the content of the unit of data. Thus, Bazoon certainly does not disclose that the storage period is stored within the document itself, let alone that it is stored in a portion of the document not used in generating a content address. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

9. Claims Related To Determining Whether The Retention Period Is Permitted To Be Reduced (i.e., Claims 10, 29, and 48)

The Office Action rejects claims 10 and 29 under 35 U.S.C. §102(e) as purportedly being anticipated by Bazoon, and rejects claim 48 “on a similar basis.”

Each of these claims relates to determining whether the retention period is permitted to be reduced and reducing the length of the retention period only when the retention period is permitted to be reduced. As discussed in Appellants' specification, at page 24, line 9 – page 25, line 2, it may be desirable to permit reduction of the retention periods for only certain types of units of data (e.g., some CDFs) to provide an additional level of security by prohibiting some types of units of data from being deleted prior to the expiration of their originally defined retention periods. Thus, this aspect of the invention provides control in allowing the reduction of retention periods.

The Office Action asserts that Bazoon discloses this limitation at ¶0022, but offers no further explanation. *See* Office Action, page 4. Appellants disagree that the cited portion (or any other portion of Bazoon) discloses or suggests this limitation.

As discussed above, ¶0022 merely discloses that a storage period for a document may be reduced if the document is determined to be not useful. Bazoon does not disclose that the storage periods for some documents are permitted to be reduced and that the storage periods for others are not, and certainly does not disclose that when a request to reduce a storage period for document is received that a determination is made as to whether the storage period may be reduced. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

10. Claims Related To Classes Indicating Whether A Retention Period Is Permitted To Be Reduced (i.e., Claims 11, 30, and 49)

The Office Action rejects claims 11 and 30 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in view of Beresnevichene (U.S. Pub. No. 2005/0076293), and claim 49 “on a similar basis.”

Each of these claims is related to determining whether a retention period is permitted to be reduced by determining whether the at least one unit of data is within a class designated as capable of having the retention period reduced. As discussed above, permitting only certain classes of units of data to have their retention periods reduced provides control so that some classes of content can have irreducible retention periods.

The Office Action concedes that Bazoon does not disclose this limitation, but asserts that ¶0007 of Beresnevichiene does. While Appellants agree that this limitation is not present in Bazoon, Appellants respectfully disagree that Beresnevichiene cures this infirmity of Bazoon.

Beresnevichiene, at ¶0007, discloses that documents may be assigned retention periods, and that the length of the retention period may be assigned to a document according to its class. For example, Beresnevichiene discloses that database documents may be assigned a retention period of three years and encrypted documents may be assigned a retention period of ten years. Thus, the classes disclosed in Beresnevichiene relate to the length of the retention periods, but are entirely unrelated to whether the retention period is permitted to be reduced. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

11. Claims Related To Determining The Class Of A Unit Of Data (i.e., Claims 12, 31, and 50)

The Office Action rejects claims 11 and 30 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in view of Beresnevichiene (U.S. Pub. No. 2005/0076293), and claim 50 “on a similar basis.”

Each of these claims relates to determining whether the at least one unit of data is within a class designated as capable of having its retention period reduced by examining the previously-defined retention period. For example, as discussed in Appellants' specification at page 24, lines 9-22, units of data that have a fixed retention periods may be designated as not being permitted to have their retention period reduced, while units of data that have an indefinite retention period may be designated as being permitted to have their retention periods reduced.

The Office Action concedes that Bazoon does not disclose this limitation, but asserts that ¶0007 of Beresnevichiene does. While Appellants agree that this limitation is not present in Bazoon, Appellants respectfully disagree that Beresnevichiene cures this infirmity of Bazoon.

As discussed above, Beresnevichiene discloses that documents may be assigned retention periods, and that the length of the retention period may be assigned to a document according to its class. These classes relate solely to the lengths of the retention period, but have nothing to do with whether the document's retention period is capable of being reduced. Nowhere does Beresnevichiene disclose or suggest reducing a retention period at all, let alone that it may be determined whether a unit of data is within a class designated as capable of having the retention period reduced by examining the retention period. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

12. Claims Relating To Examining A Flag Associated With A Unit Of Data To
Determine Whether The Unit Of Data Is In A Class Capable Of Having Its
Retention Period Reduced (i.e., Claims 13, 32, and 51)

The Office Action rejects claims 13 and 32 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in view of Beresnevichiene (U.S. Pub. No. 2005/0076293) and Chang (U.S. Patent No. 6,690,774), and rejects claim 51 "on a similar basis."

Each of these claims relates to determining whether the at least one unit of data is within a class designated as capable of having the retention period reduced by examining a flag associated with the unit of data. As discussed in Appellants' specification at page 25, lines 8-23, a flag may be associated with a unit of data to indicate whether the retention period of the unit of data may be reduced. The flag may be stored within the content of the unit of data itself or in a record external to the unit of data.

The Office Action concedes that neither Bazoon nor Beresnevichiene disclose this limitation, but asserts Chang discloses this limitation at col. 10, lines 20-30. Appellants respectfully disagree that Chan discloses this limitation.

The cited portion of Chang is entirely unrelated to examining a flag of unit of data to determine if the unit of data is within a class designated as capable of having its retention period reduced. Rather, Chang is directed to the use of a voicemail witness service, which people in dangerous situations may use to create a voicemail record of their encounter and to receive help, if needed (Chang, col. 1, lines 58-64). A person may activate the voicemail witness service by dialing a voicemail system and entering a predefined number to instruct the system to begin recording (col. 2, lines 2-5). Each recording is retained for a specified default period of time. At col. 10, lines 20-30, Chang discloses that the calling party may select an option to retain a voicemail witness record beyond the default period by entering a retention passcode. When this occurs, the system may set a flag in memory. When the default period expires, if the flag is set, then the system does not delete the record. Otherwise, when the default period expires, the system deletes the record from the voice mailbox.

Thus, the portion of Chang relied on by the Examiner does not disclose a flag that is used to determine whether the retention period of a unit of data may be reduced. Rather, the flag in Chang is used by the system to determine, **after the retention period for a voicemail witness record has expired**, whether the voicemail witness record is to be deleted from a voice mailbox. Nowhere does Chang disclose or suggest reducing retention periods for voicemail witness records or using a flag to determine whether such a retention period is permitted to be reduced. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

13. Claims Relating to Maintaining A History Of The Reduction Of A Retention Period (i.e., Claims 18, 37, and 56)

The Office Action rejects claims 18 and 37 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in view of DeKimpe (6,542,895), and claim 56 “on a similar basis.”

Each of these claims is related maintaining a record for the unit of data that stores a history of the reduction of its retention period.

The Office Action concedes that Bazoon does not disclose this limitation, but asserts that DeKimpe discloses it at col. 2, lines 45-60. Appellants respectfully disagree that DeKimpe cures this infirmity of Bazoon.

The cited portion of DeKimpe discloses that changing the dimensions of multi-dimensional database may result in the deletion of a large number of rows of a database table. DeKimpe discloses that this may slow performance of the database management system because each of these changes needs to be logged in a transaction log file. That is, DeKimpe discloses that a database management system keeps a log of each database transaction made in a database management system. DeKimpe does not even mention retention periods and certainly does not disclose that a history of the reduction of a retention period of unit of data be stored. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

14. Claims Relating To Restoring A Retention Period (i.e., Claims 19, 38, 57, 64, and 71)

The Office Action rejects claim 19 under 35 U.S.C. §103(a) as purportedly being obvious over Bazoon in view of DeKimpe (6,542,895), and claims 38, 57, 64, and 71 “on a similar basis.”

Each of these claims is related to a request to restore a retention period to a previous length and/or restoring the retention period to that length. For example, as discussed in Appellants' specification at page 33, lines 5-25, the ability to restore a retention period may be advantageous in situations where the retention period for a unit of data was inadvertently reduced.

The Office Action concedes that Bazoon does not disclose this limitation, but asserts that DeKimpe discloses it at col. 2, lines 45-60. Appellants respectfully disagree that DeKimpe cures this infirmity of Bazoon.

As discussed above, the cited portion of DeKimpe discloses that changing the dimensions of multi-dimensional database may result in the deletion of a large number of rows of a database

table. DeKimpe discloses that this may slow performance of the database management system because each of these changes needs to be logged in a transaction log file. That is, DeKimpe discloses that a database management system keeps a log of each transaction made in a database. DeKimpe does not even mention retention periods, let alone discuss reducing a retention period, or restoring a reduced retention period to its previous length. Accordingly, these claims further distinguish over the prior art for this additional reason and their rejection should be reversed.

VIII. CONCLUSION

For the foregoing reasons, the rejection of claims 1-80 is improper and should be reversed.

Respectfully submitted,



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APPENDIX A – CLAIMS AS PENDING

1. (Previously presented) A method of processing data in a computer system comprising at least one host and at least one content addressable storage (CAS) system, wherein the at least one host identifies units of data on the at least one CAS system using content addresses each generated based, at least in part, on at least a portion of the content of the corresponding unit of data, the at least one CAS system storing at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted from the at least one CAS system, the method comprising acts of:
 - (A) receiving, at the at least one CAS system, a request from the at least one host to reduce a length of the retention period for the at least one unit of data; and
 - (B) reducing the length of the retention period for the at least one unit of data in response to the request.
2. (Original) The method of claim 1, wherein the request comprises an event command indicating the occurrence of an event.
3. (Previously presented) The method of claim 2, wherein the event command does not specify the manner in which the retention period is to be reduced, and wherein the act (B) further comprises an act of determining the manner of reducing the retention period by referring to information stored within or accessible to the CAS system.
4. (Original) The method of claim 1, wherein the request specifies that the retention period be reduced and the manner in which the length of the retention period is to be reduced.
5. (Previously presented) The method of claim 1, wherein the at least one CAS system stores the previously-defined retention period within the unit of data, and wherein the act (B) further comprises replacing the unit of data with a new unit of data having the reduced retention period.

6. (Previously presented) The method of claim 1, wherein the at least one CAS system stores the previously-defined retention period in a record outside of the unit of data, and wherein the act (B) further comprises modifying the record to reduce the previously-defined retention period.

7. (Previously presented) The method of claim 1, wherein the at least one CAS system is responsive to access requests from the at least one host that reference a content address for the unit of data that is generated based on the content of the unit of data.

8. (Original) The method of claim 7, wherein the content address the unit of data is generated based on only a first portion of the content of the unit of data and not on a second portion of the content of the unit of data.

9. (Previously presented) The method of claim 8, wherein the at least one CAS system stores the previously-defined retention period in the second portion of the content of the unit of data on which generation of the content address is not based, and wherein the act (B) further comprises an act of reducing the previously-defined retention period specified in the second portion of the content of the unit of data.

10. (Original) The method of claim 1, wherein the act (B) further comprises acts of:
(B1) determining whether the previously-defined retention period for the unit of data is permitted to be reduced; and

(B2) reducing the length of the previously-defined retention period only when the previously-defined retention period for the unit of data is permitted to be reduced.

11. (Original) The method of claim 10, wherein the act (B1) further comprises determining whether at least one of the unit of data and the previously-defined retention period is within a class designated as capable of having the retention period reduced.

12. (Original) The method of claim 11, wherein the act (B1) further comprises determining whether at least one of the unit of data and the previously-defined retention period is within the class designated as capable of having the retention period reduced by examining the previously-defined retention period.

13. (Original) The method of claim 11, wherein the act (B1) further comprises determining whether at least one of the unit of data and the previously-defined retention period is within the class designated as capable of having the retention period reduced by examining a flag associated with the unit of data.

14. (Original) The method of claim 1, wherein the act (B) further comprises an act of reducing the length of the previously-defined retention period to zero.

15. (Original) The method of claim 1, wherein the act (B) further comprises an act of deleting the unit of data.

16. (Original) The method of claim 15, further comprising an act of:
creating an audit log entry that records information about the deletion of the unit of data.

17. (Original) The method of claim 15, further comprising an act of creating a new unit of data to replace the deleted unit of data, the new unit of data having a retention period shorter than the previously-defined retention period.

18. (Previously presented) The method of claim 1, further comprising an act of maintaining on the at least one CAS system at least one record for the unit of data, the at least one record storing a history of the reduction of the previously defined retention period.

19. (Previously presented) The method of claim 18, further comprising acts of:

receiving, at the at least one CAS system, a request from the at least one host to restore the retention period to the length of the previously-defined retention period for the at least one unit of data; and

restoring the retention period to the length of the previously-defined retention period in response to the request.

20. (Previously presented) At least one computer readable medium encoded with instructions that, when executed on a computer system, perform a method of processing data, wherein the computer system comprises at least one host and at least one content addressable storage (CAS) system, wherein the at least one host identifies units of data on the at least one CAS system using content addresses each generated based, at least in part, on at least a portion of the content of the corresponding unit of data, the at least one CAS system storing at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted from the at least one CAS system, the method comprising acts of:

(A) receiving, at the at least one CAS system, a request from the at least one host to reduce a length of the retention period for the at least one unit of data; and

(B) reducing the length of the retention period for the at least one unit of data in response to the request.

21. (Original) The at least one computer readable medium of claim 20, wherein the request comprises an event command indicating the occurrence of an event.

22. (Previously presented) The at least one computer readable medium of claim 21, wherein the event command does not specify the manner in which the retention period is to be reduced, and wherein the act (B) further comprises an act of determining the manner of reducing the retention period by referring to information stored within or accessible to the at least one CAS system.

23. (Original) The at least one computer readable medium of claim 20, wherein the request specifies that the retention period be reduced and the manner in which the length of the retention period is to be reduced.

24. (Previously presented) The at least one computer readable medium of claim 20, wherein the at least one CAS system stores the previously-defined retention period within the unit of data, and wherein the act (B) further comprises replacing the unit of data with a new unit of data having the reduced retention period.

25. (Previously presented) The at least one computer readable medium of claim 20, wherein the at least one CAS system stores the previously-defined retention period in a record outside of the unit of data, and wherein the act (B) further comprises modifying the record to reduce the previously-defined retention period.

26. (Previously presented) The at least one computer readable medium of claim 20, wherein the at least one CAS system is responsive to access requests from the at least one host that reference a content address for the unit of data that is generated based on the content of the unit of data.

27. (Original) The at least one computer readable medium of claim 26, wherein the content address the unit of data is generated based on only a first portion of the content of the unit of data and not on a second portion of the content of the unit of data.

28. (Previously presented) The at least one computer readable medium of claim 27, wherein the at least one CAS system stores the previously-defined retention period in the second portion of the content of the unit of data on which generation of the content address is not based, and wherein the act (B) further comprises an act of reducing the previously-defined retention period specified in the second portion of the content of the unit of data.

29. (Original) The at least one computer readable medium of claim 20, wherein the act (B) further comprises acts of:

(B1) determining whether the previously-defined retention period for the unit of data is permitted to be reduced; and

(B2) reducing the length of the previously-defined retention period only when the previously-defined retention period for the unit of data is permitted to be reduced.

30. (Original) The at least one computer readable medium of claim 29, wherein the act (B1) further comprises determining whether at least one of the unit of data and the previously-defined retention period is within a class designated as capable of having the retention period reduced.

31. (Original) The at least one computer readable medium of claim 30, wherein the act (B1) further comprises an act of determining whether at least one of the unit of data and the previously-defined retention period is within the class designated as capable of having the retention period reduced by examining the previously-defined retention period.

32. (Original) The at least one computer readable medium of claim 30, wherein the act (B1) further comprises an act of determining whether at least one of the unit of data and the previously-defined retention period is within the class designated as capable of having the retention period reduced by examining a flag associated with the unit of data.

33. (Original) The at least one computer readable medium of claim 20, wherein the act (B) further comprises an act of:

reducing the length of the previously-defined retention period to zero.

34. (Original) The at least one computer readable medium of claim 20, wherein the act (B) further comprises an act of deleting the unit of data.

35. (Original) The at least one computer readable medium of claim 34, wherein the method further comprises an act of creating an audit log entry that records information about the deletion of the unit of data.

36. (Original) The at least one computer readable medium of claim 34, wherein the method further comprises an act of creating a new unit of data to replace the deleted unit of data, the new unit of data having a retention period shorter than the previously-defined retention period.

37. (Previously presented) The at least one computer readable medium of claim 20, wherein the method further comprises an act of maintaining on the at least one CAS system at least one record for the unit of data, the at least one record storing a history of the reduction of the previously defined retention period.

38. (Previously presented) The at least one computer readable medium of claim 37, wherein the method further comprises acts of:

receiving, at the at least one CAS system, a request from the at least one host to restore the retention period to the length of the previously-defined retention period for the at least one unit of data; and

restoring the retention period to the length of the previously-defined retention period in response to the request.

39. (Previously presented) A storage system for use in a computer system including the storage system and at least one host, wherein the storage system is a content addressable storage (CAS) system, and wherein the at least one host identifies units of data on the at least one CAS system using content addresses generated based, at least in part, on at least a portion of the content of the corresponding unit of data, the storage system comprising:

at least one storage device to store at least one unit of data received from the at least one host, the unit of data having an associated retention period during which the at least one unit of data cannot be deleted from the storage system; and

at least one controller that is adapted to:

receive a request from the at least one host to reduce a length of the retention period for the at least one unit of data; and

reduce the length of the retention period for the at least one unit of data in response to the request.

40. (Original) The storage system of claim 39, wherein the request comprises an event command indicating the occurrence of an event.

41. (Original) The storage system of claim 40, wherein the event command does not specify the manner in which the retention period is to be reduced, and wherein the at least one controller is adapted to determine the manner of reducing the retention period by referring to information stored within or accessible to the storage system.

42. (Original) The storage system of claim 39, wherein the request specifies that the retention period be reduced and the manner in which the length of the retention period is to be reduced.

43. (Original) The storage system of claim 39, wherein the storage system stores the retention period within the unit of data, and wherein the at least one controller is adapted to replace the unit of data with a new unit of data having the reduced retention period.

44. (Original) The storage system of claim 39, wherein the storage system stores the retention period in a record outside of the unit of data, and wherein the at least one controller is adapted to modify the record to reduce the previously-defined retention period.

45. (Previously presented) The storage system of claim 39, wherein the at least one storage system is responsive to access requests from the at least one host that reference a content address for the unit of data that is generated based on the content of the unit of data.

46. (Original) The storage system of claim 45, wherein the content address for the unit of data is generated based on only a first portion of the content of the unit of data and not on a second portion of the content of the unit of data.

47. (Original) The storage system of claim 46, wherein the storage system stores the retention period in the second portion of the content of the unit of data on which generation of the content address is not based, and wherein the at least one controller is adapted to reduce the retention period specified in the second portion of the content of the unit of data.

48. (Original) The storage system of claim 39, wherein the at least one controller is adapted to: determine whether the retention period for the unit of data is permitted to be reduced; and reduce the retention period only when the retention period for the unit of data is permitted to be reduced.

49. (Original) The storage system of claim 48, wherein the at least one controller is adapted to determine whether at least one of the unit of data and the retention period is within a class designated as capable of having the retention period reduced.

50. (Original) The storage system of claim 49, wherein the at least one controller is adapted to determine whether the at least one unit of data and the retention period is within the class designated as capable of having the retention period reduced by examining the retention period.

51. (Original) The storage system of claim 49, wherein the at least one controller is adapted to determine whether the at least one unit of data and the retention period is within the class designated as capable of having the retention period reduced by examining a flag associated with the unit of data.

52. (Original) The storage system of claim 39, wherein the request specifies to reduce the length of the retention period, and wherein the at least one controller is adapted to reduce the length of the retention period to zero in response to the request.

53. (Original) The storage system of claim 39, wherein the request specifies to delete the unit of data, and wherein the at least one controller deletes the unit of data in response to the request.

54. (Original) The storage system of claim 53, wherein the at least one controller is adapted to create an audit log entry that records information about the deletion of the unit of data.

55. (Original) The storage system of claim 53, wherein the at least one controller is adapted to create a new unit of data to replace the deleted unit of data, the new unit of data having a second retention period shorter than the retention period.

56. (Original) The storage system of claim 39, wherein the at least one controller is adapted to maintain on the storage system at least one record for the unit of data, the at least one record storing a history of the reduction of the previously defined retention period.

57. (Original) The storage system of claim 56, wherein the at least one controller is adapted to:

receive, at the at least one storage system, a request from the at least one host to restore the retention period to a previously-defined length for the at least one unit of data; and
restore the retention period to the previously-defined length in response to the request.

58. (Previously presented) A method of processing data in a computer system comprising at least one host and at least one content addressable storage (CAS) system, wherein the at least one host identifies units of data on the at least one CAS system using content addresses generated based, at least in part, on at least a portion of the content of the unit of data, the at least one CAS system storing at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted from the at least one CAS system, the method comprising acts of:

(A) sending, from the at least one host, a request to the at least one CAS system to reduce a length of the retention period for that at least one unit of data; and

(B) receiving, from the at least one CAS system, a response indicating that the request was granted.

59. (Original) The method of claim 58, further comprising an act of sending the request in response to the occurrence of an event.

60. (Original) The method of claim 58, wherein the request comprises an event command indicating the occurrence of an event.

61. (Original) The method of claim 60, wherein the event command does not specify the manner in which the retention period is to be reduced.

62. (Original) The method of claim 58, wherein the request specifies that the retention period is to be reduced and the manner in which the length of the retention period is to be reduced.

63. (Previously presented) The method of claim 58, wherein the at least one host accesses the unit of data stored on the at least one CAS system using a content address generated based on the content of the unit of data.

64. (Previously presented) The method of claim 58, further comprising an act of:
sending, from the at least one host, a second request to the at least one CAS system to restore the retention period to the length of the previously-defined retention period for the at least one unit of data.

65. (Previously presented) At least one computer readable medium encoded with instructions that, when executed on a computer system, perform a method of processing data, wherein the computer system comprises at least one host and at least one content addressable

storage (CAS) system, wherein the at least one host identifies units of data on the at least one CAS system using content addresses generated based, at least in part, on at least a portion of the content of the corresponding unit of data, the at least one CAS system storing at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted from the at least one CAS system, the method comprising acts of:

(A) sending, from the at least one host, a request to the at least one CAS system to reduce a length of the retention period for that at least one unit of data; and

(B) receiving, from the at least one CAS system, a response indicating that the request was granted.

66. (Original) The at least one computer readable medium of claim 65, wherein the method further comprises an act of sending the request in response to the occurrence of an event.

67. (Original) The at least one computer readable medium of claim 65, wherein the request comprises an event command indicating the occurrence of an event.

68. (Original) The at least one computer readable medium of claim 67, wherein the event command does not specify the manner in which the retention period is to be reduced.

69. (Original) The at least one computer readable medium of claim 65, wherein the request specifies that the retention period is to be reduced and the manner in which the length of the retention period is to be reduced.

70. (Previously presented) The at least one computer readable medium of claim 65, wherein the at least one host accesses the unit of data stored on the at least one CAS system using a content address generated based on the content of the unit of data.

71. (Previously presented) The at least one computer readable medium of claim 65, wherein the method further comprises an act of:

sending, from the at least one host, a second request to the at least one CAS system to restore the retention period to the length of the previously-defined retention period for the at least one unit of data.

72. (Previously presented) A host computer for use in a computer system that includes the host computer and at least one CAS system, wherein the at least one host identifies units of data on the at least one CAS system using content addresses generated based, at least in part, on at least a portion of the content of the corresponding unit of data, the at least one CAS system storing, for the at least one host, at least one unit of data having a previously-defined retention period during which the at least one unit of data cannot be deleted from the at least one CAS system, the host computer comprising:

at least one storage device; and

at least one controller, coupled to the at least one storage device, that is adapted to send a request to the at least one CAS system to reduce a length of the retention period for that at least one unit of data and receive, from the at least one CAS system, a response indicating that the request was granted.

73. (Original) The host computer of claim 72, wherein the at least one controller is adapted to send the request in response to the occurrence of an event.

74. (Original) The host computer of claim 72, wherein the request comprises an event command indicating the occurrence of an event.

75. (Original) The host computer of claim 74, wherein the event command does not specify the manner in which the retention period is to be reduced.

76. (Original) The host computer of claim 72, wherein the request specifies that the retention period is to be reduced and the manner in which the length of the retention period is to be reduced.

77. (Previously presented) The host computer of claim 72, wherein the host computer is adapted to access the unit of data stored on the at least one CAS system using a content address generated based on the content of the unit of data.

78. (Previously presented) The host computer of claim 72, wherein the at least one controller is adapted to send a second request to the at least one CAS system to restore the retention period to the length of the previously-defined retention period for the at least one unit of data.

79. (Previously presented) The host computer of claim 72, in combination with the at least one CAS system.

80. (Previously presented) The host computer of claim 72, wherein the at least one controller comprises:

means for sending a request to the at least one CAS system to reduce a length of the retention period for that at least one unit of data.

APPENDIX B – EVIDENCE

None.

APPENDIX C – RELATED PROCEEDINGS

None.